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VOLUME V
Number 3

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SPECIAL FEATURE

The Complete Text of the Senate
Report on the Aircraft Situation

PUBLISHED SEMI-MONTHLY
BY
THE GARDNER-MOFFAT CO., Inc.
120 WEST 32nd ST. NEW YORK

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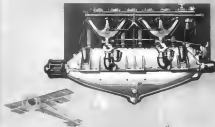
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5.—The combination of the three systems and the simplicity of the Philbrin Contact Maker make ignition failure practically impossible. This Contact Maker operates positively, without lag and has ample capacity for any speed the engine can attain.

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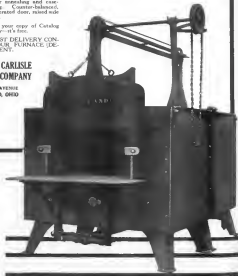
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SEPTEMBER 1, 1918

AVIATION AND AERONAUTICAL ENGINEERING

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CIRCULATION MANAGER

Vol. V

September 1, 1935

No. 5

Aircraft Production in the United States

Report of the Sub-Committee to the Senate Committee on Military Affairs

After having been engaged in another investigation of a phase of the aircraft situation since the first part of June, the report of the sub-Committee on Military Affairs headed by Senator Thomas was submitted to the Senate on Aug. 22. Other members were Wendell Ford (Mo.), Smith (Ga.), New (Ind.) and Fiebelgorn (N. J.). The committee has found much to be concerned, and some things to commend and has not hesitated at favorable or unfavorable criticism wherever it seemed to them to be deserved.

On the other hand, the report includes little which is really new, except in some added detail.

In recommending for the creation of an independent Air Secretary, with a seat on the Cabinet, is likely to arouse antagonism, but there are other recommendations from which are acknowledged valuable on their face and will be less disputed.

Salient Features

Among the salient features and recommendations are the following:

A substantial part of the \$640,000,000 appropriation was presently wasted.

Up to July 1 only 67 of 668 American-made DH 4's and others had reached the battle front.

Tests of forty H4-4's proved them structurally weak and defective. These are to be replaced with a De Havilland type of later design.

Contracts were let for 2,500 DH 4's, upon which work was stopped and numerous defects in design and workmanship could be remedied.

Over 46,500,000 was expended on the Bristol fighter which was then cancelled and its production almost halted.

After more than 1,500 Standard J training machines at a total cost of \$6,000,000 had been produced they were abandoned and stored.

An order for 3,000 Road planes was subsequently canceled on the ground of obsolescence, yet afterward a contract was placed for 1,000 equivalents, and this country is now buying every French Road it can secure.

This contract was canceled because the Aircraft Board desired to equip the Spade with the Liberty 8, which was not practicable. At about this time the Liberty 8 itself was discarded.

Only SE 5's and Handley-Page machines can be put in quantity production before 1919.

Airplane Contracts

A contract placed for 200 Caprons was not carried out, because the manufacturer could not obtain the information. It was cancelled later, and a contract for the Bristol fighter was substituted.

Only one experimental Capron bombing plane, equipped with Liberty engines, has been built in this country, although the necessary data and facilities have been in hand since October, 1917.

Plans for the Handley-Page bombers were ready last summer but a sample plane was not completed until a year later.

There is at the front not one American-made plane and not one American-made heavy bombing plane.

The United States has neither developed nor produced a quantity of a successful fighting plane.

Three disappointing results are ascribed to automobile and other manufacturers who through unacquainted with mechanical problems controlled the aircraft program and substituted it to the creation of the Liberty engine instead of carrying on its production at the same time with the reproduction of approved European types.

Such mistakes would have largely been avoided had production been made subordinate to one man, assisted in trained aeronautical engineers in design machines and practical them to test them.

Organization under the Aircraft Board was uncooperative and inefficient, hindering production and yet allowing responsibility to drift.

Charles Clark's and Rollins' report recommending production of British, French and Italian planes was introduced in the Senate.

Hundreds of changes in the redesign of the British fighter by Colonel Clark were made by authority of the Naval Corps without consulting him.

Americans at the front are using many antiquated machines discarded by the French eighteen months ago. Many of them are unsafe or unreliable.

Liberty Engines

The Liberty-12 is too heavy and powerful for the lighter types of planes and is not yet perfected. More than 4,000 have been delivered.

The notion that the Liberty engine could be used on all sizes and types of airplanes was encouraged and is largely responsible for the delay in the aircraft program.

No fighting planes of American or other design have been built around the Liberty engine. Our air program will not be completed until this is accomplished.

Conspicuous manufacturers of the best foreign engines with that of the Liberty, as we are now doing, should have been begun a year ago.

Manufacture of the Bell-Burns engine by American sources should have been a boon for the American rather than for the British Government.

Impetuous system of the Signal Corps functioned badly and considered defective material has totaled its way back to the producer.

Colonel Doolittle is concerned in establishing a flying field at Miami without the knowledge and consent of the different having charge of the works, for a neighboring state between Dayton and Bristol, and for financial interests in hand at Dayton prior to acquisition for its home as a flying field for the Government.

The site of William Wright Field is considered as low and unsound.

To the civilian personnel of the Aircraft Board and its more prominent subordinates identified with industrial development in three respective communities, is ascribed the favoritism alleged to have been shown in the awards of contracts.

Cross-Licensing Disappeared

A row involving is disapproved by the committee and is considered in every air plane manufacturer who enters of its insurance beneficiaries have created license agreements under protest because recommended or required in the Aircraft Board.

Under Mr. Ryan and General Keady the loose ends of the former representation are being gathered with some further recommendations already apparent.

Confusion of the Army and Navy air services under a unified board with a seat in the Cabinet, is suggested.

A commission of engineers and pilots for observation at the front and reporting regularly to the proposed war department similar to that maintained by the Allies is recommended as imperative.

Production of planes and engines in continuing quantity by the constructive activities of all responsible men comes to full capacity in the peace and of the home.

College and university courses in aerodynamics and mechanical engineering and in training for them should be established at Government expense.

An Investigation Section of the War Department is recommended as a step in the right direction for group passage consideration to new devices and suggestions.

Apple protection should be extended by the Patent Office to applications for aircraft inventions.

Profits on some contracts for engines and planes are too high.

Producers should be required to bear the expense of planes and engines rejected, because of defective con-

struction or materials not furnished direct by the Government.

Compulsory and better protection against fire in airplane factories is actively recommended.

In full the report is as follows:

THE REPORT

On April 6, 1935, the United States entered the war. On June 5, 1935, public announcement was made that a great fleet of 30,000 airplanes was about to be created, and would be driven to the war fronts before an effective army could be put up by the Germans.

On July 26, 1935, Congress appropriated \$500,000,000 to carry out the aircraft program. This fund has been used by the Government to the extent of \$100,000,000. A further appropriation of \$500,000,000 has been made available.

In the opinion of the committee a substantial part of the first appropriation was practically wasted. The committee is of the opinion that such waste has been accomplished, for which credit should be given, it must necessarily be admitted that our airplane program has, up to the present, presented many aspects of failure. A number of these are set forth below.

The Situation

While no one of these and several others has in its month the aircraft situation is as follows:

(1) The board and the Air Corps have been in the hands of the President up to August 3, 1935.

(2) There is still no record of the first day.

(3) The Air Corps is still in the hands of the President and the German lines. Details of its performance have not been received. The Air Corps is still in the hands of the President and the German lines. Details of its performance have not been received.

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(18) The Air Corps is still in the hands of the President and the German lines. Details of its performance have not been received.

part the airplane has been accomplished in the field, for a squadron of 18 planes has been sent across the German line.

(19) As early as the month of October, 1937, we were in possession of the necessary facilities to construct the Captain, a powerful and successful flying bombing plane, approved by the Air Corps and the Signal Corps.

Report indicates airplanes have been up to the ground since the month of January, of the first mission that we have up to the present, only one experimental machine which is equipped with Liberty engine.

Aside a vast air program now we would have begun work upon these airplanes and by this time has been in quantity.

(20) The Hamilton-Paine has a bombing machine facilities under a sample of this. Plans a new improved the board (under the Signal Corps) in 1935, but have not the Signal Corps for some parts were not made until February, 1935. Details of these parts were not made until August, 1935. The Signal Corps is still in the hands of the President and the German lines. Details of its performance have not been received.

Causes for Disappointing Results

In the opinion of the committee the disappointing results have not been due to any one cause, but to three causes:

(1) That the airplane program was largely placed in the hands of the Signal Corps and the Air Corps, who were ignorant of aircraft development.

(2) That the committee was not in a position to check the progress of the program and to see that it was being carried out in a satisfactory manner.

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theory that aircraft engine and plane production were analogous pursuits. The latter was therefore submitted to the standards of mass skilled in automobile production. A board of experts was created to study the automobile industry and manufacturing for the solution of aviation problems. The analogy between the two pursuits is entirely bogus and it was not until each such an analogy was made that the difficulties in design and production would be increased and such solutions were recognized. This fact must have been demonstrated to the board through its actual experience, for Major Doolittle stated in the beginning the board worked much activity with little responsibility.

They wanted the Signal Corps to create contracts and stand back of them, and they wanted to be in an advisory capacity, and still control the situation.

Later, when—

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